THE SOUTH TEXAS REGIONAL COCORAHS NEWSLETTER

NWS Corpus Christi

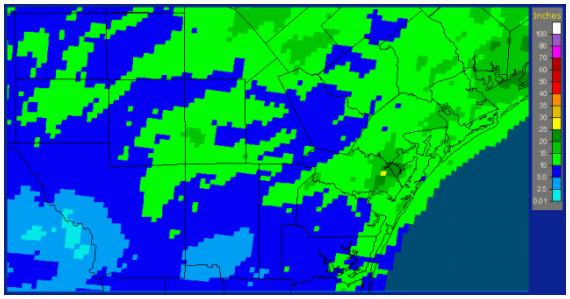
Summer 2012 Edition

Welcome to the summer edition of the CoCoRaHS newsletter!

by Christina Barron

We've definitely had some noticeable changes over the past several months — going from bone dry weather in the fall of 2011 to strong to severe thunderstorms, flooding and some improvements in the drought status in the spring of 2012. We've also experienced late season cold frontal passages and abnormally high temperatures. Typical Texas weather, eh?

With the exiting La Niña season, more changes are in store for the summer into fall seasons. In this article, we'll explore what changes are typical with the entering ENSO (El Niño – Southern Oscillation)/ Neutral season from rainfall to hurricanes to the current drought status.

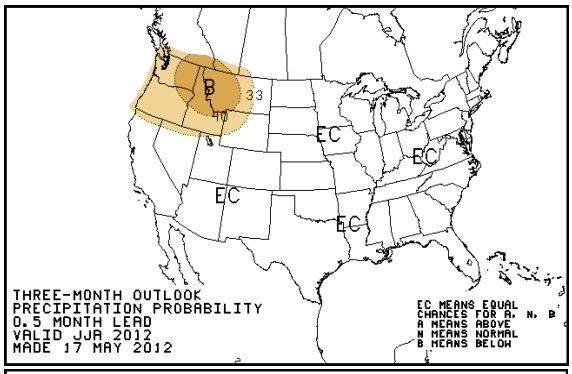


Rainfall amounts as depicted from the Advanced Hydrologic Prediction Service (AHPS) for the period of Jan—May 2012. Localized rainfall amounts range from a trace to 25+ inches.

Climate Prediction Outlook: Normal Rainfall Possible? Drought Improvement?

By Juan Alanis & Christina Barron

While some areas of South Texas and the coastal bend have been receiving plentiful rainfall, many others have not. There is finally some good news in terms of rainfall — outlooks are calling for a return of near normal rainfall patterns over the summer and fall.



The 3-Month outlook for June/July/ August shows an equal chance for above, below or near normal rainfall for most of the contiguous U.S.

Exiting La Niña Pattern

According to the Climate Prediction Center (CPC), the La Niña pattern that has devastated much of the state since late 2010, has officially ended.

During a La Niña year, drier and warmer than normal conditions are experienced. With the exit of La Niña and an entering ENSO (El Niño-Southern Oscillation)/ Neutral season, rainfall is climatologically expected to increase with near normal rainfall possible.

Observations of cooler sea surface temperatures in the eastern equatorial Pacific waters can provide evidence to whether or not a La Niña is occurring or showing trends of occurring.

(continued on page 2)

Inside this issue:

Impacting the Drought

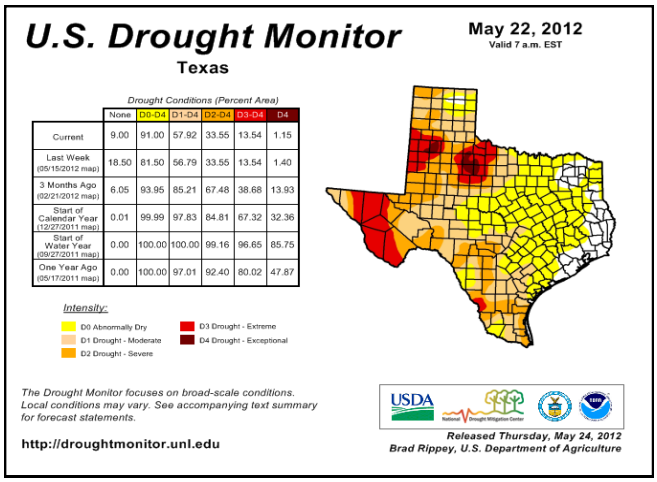
During the Spring of 2012, the La Niña weather pattern weakened which allowed for more generous rains to parts of North, Central and South Texas as frontal boundaries and upper level disturbances approached the area. Due to the abundant rainfall, there has been improvement to the drought status over South Texas. As of April 2012, the status of Exceptional Drought has been removed from South Texas—however, Moderate to Severe to Extreme drought conditions continue to exist over portions of the area. Any additional (or lack thereof) will lead to improving (or deteriorating) conditions.

Climate Prediction Center Outlook

As we enter the dog days of summer across South Texas, the CPC expects ENSO/Neutral conditions to prevail in the tropical Pacific waters. For South Texas, this will mean areas may receive more frequent rains from daily sea breezes—a feature which La Nina prevents.

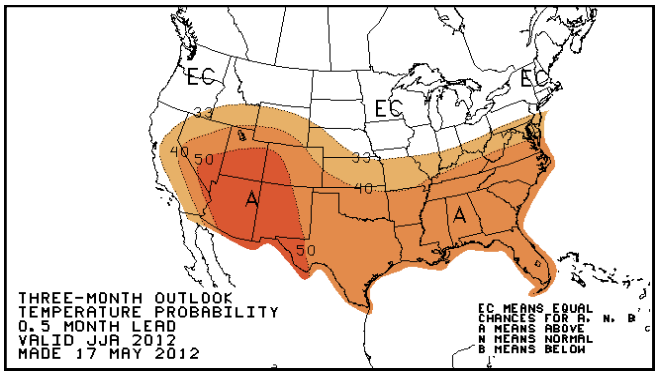
Farther down the line, some of the CPC forecast models show an El Niño pattern developing. This means the waters of the tropical Pacific become warmer than normal. An El Niño pattern, if it develops, climatologically leads to a wetter than normal fall and winter seasons across southern Texas….which would be great news.

The latest 3-Month Outlooks from the CPC show equal chances for Above, Below or near Normal rainfall through August. This means that normal rainfall is possible, but due to the transition period from a La Niña to an ENSO/Neutral Season, above or below normal rainfall remains possible as well. A good point to take is that CPC does not see a more favorable chance for below normal rainfall. However, a downside to the outlooks is the forecast for above normal temperatures through August.

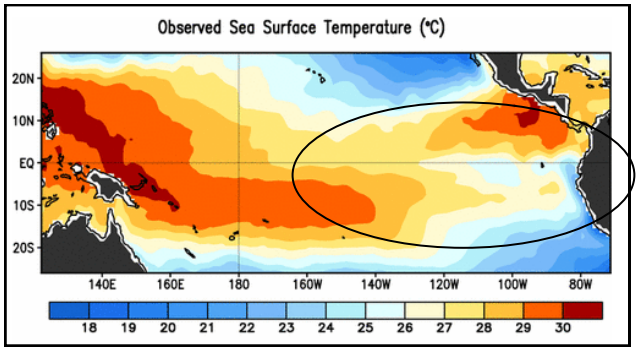


ABOVE: The U.S. Drought monitor showing Abnormally Dry to Extreme Drought over South Texas.

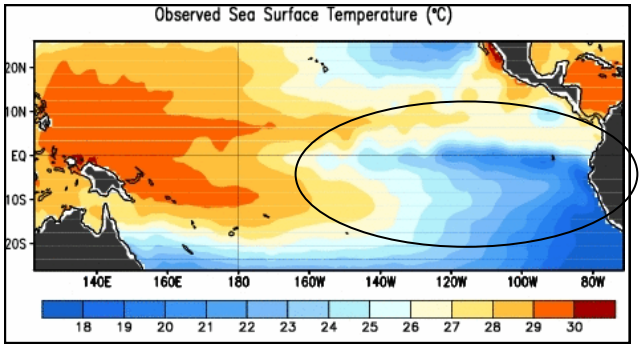
BELOW: There is a greater chance for Above Normal Temperatures for the 3-Month period of June/July/August.



BELOW: Warming temperatures over the eastern Pacific is a transitioning sign of an exiting La Niña weather pattern into an ENSO (El Niño-Southern Oscillation)/Neutral weather pattern. The pictures below were taken 7 months apart.



The 7-day Average Sea Surface Temperatures across the equatorial Pacific waters centering on May 16, 2012



The 7-day Average Sea Surface Temperatures across the equatorial Pacific waters centering on October 19, 2011

2012 Hurricane Season

by Christina Barron

June 1, 2012 marks the official first day of the 6 month long 2012 Atlantic hurricane season! NOAA announced that atmospheric and oceanic conditions will favor a near-normal hurricane season as we exit the La Niña season and enter the ENSO/Neutral season.

Hurricane Forecast

- **9 – 15 named storms** (with winds of 39 mph or greater)
- **4 – 8** of the named storms becoming **hurricanes** (winds of 74 mph or greater)
- **1 – 3** of those hurricanes becoming **major hurricanes** (winds of 111 mph or greater).

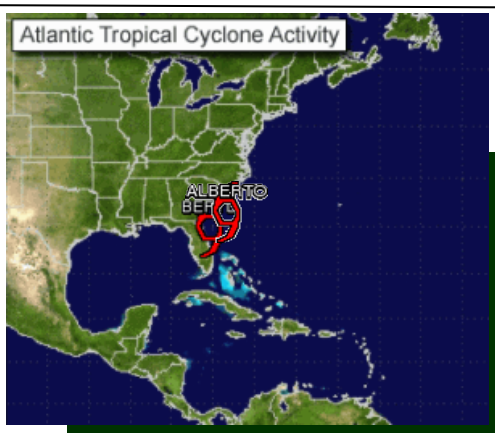
If the development of an El Niño occurs by late summer, the numbers may decrease, which is typical in an El Niño pattern, although, not always true.

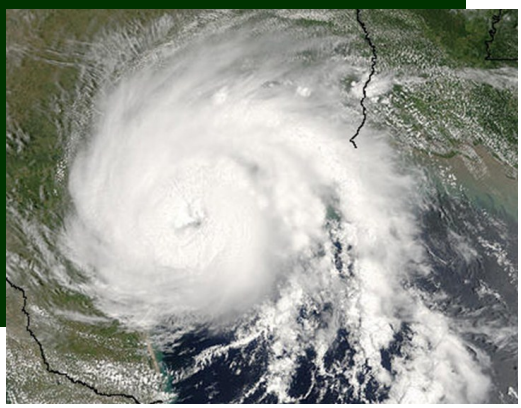
No matter what the chances are, everyone should always prepare as if this is the year a hurricane will hit the middle Texas coast.

For more information on any approaching tropical cyclones, check out the following websites:

National Hurricane Center: www.nhc.noaa.gov

NWS Corpus Christi: www.weather.gov/corpuschristi





South Texas Severe Weather Recap

by Christina Barron

When forecasting for the area, meteorologist look for three main weather ingredients: moisture, instability and a type of lifting mechanism. Being near the Gulf of Mexico, bountiful moisture and instability is usual over South Texas. However, due to the proximity of the Sierra Madre located in Mexico, dry air frequently moves in over the South Texas region, "capping" or limiting storm production. This is when a lifting mechanism in the form of an upper disturbance or frontal boundary aides in overcoming the "cap".

During the first few months of 2012, there have already been multiple occasions where severe weather has occurred across South Texas bringing large hail, heavy rain, flooding and tornados due to all of the three weather ingredients coming together and the "cap" being very weak or non-existent. The tornados confirmed during the period were rated using the Enhanced Fujita – with ratings of either EF-0 (65 - 85 mph) or EF-1 (86 – 110 mph).

Squall Line through South Texas, March 19/20

In the late evening of March 19th, a squall line (a strong line of thunderstorms) moved through the South Texas. This long line of strong to severe thunderstorms brought strong winds to the area – with winds of 60 – 80 mph along the main line and winds of 40 – 50 mph reported behind the squall line. The strong winds caused damages to the George West area where roofs and bay doors were blown down, as well as large tree limbs, utility poles, signs and fence posts. Rainfall amounts averaged 1-2 inches.

(continued on page 4)

LEFT: A large tree snapped in George West during the March 19/20 event.

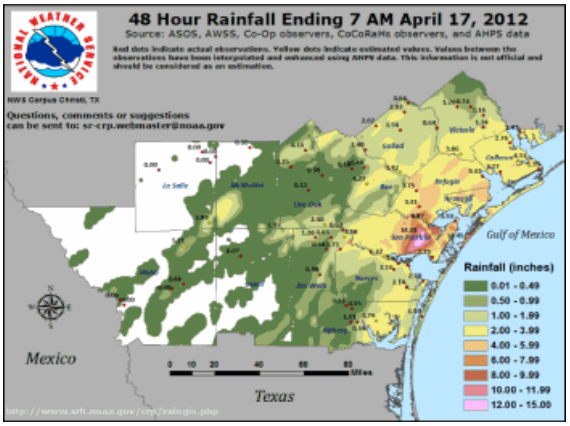
LEFT: A large tree uprooted in Port Lavaca during the April 2nd event.

Strong winds in Port Lavaca, April 2

Late on April 1st into the early morning hours of April 2nd, an upper disturbance aided in the development of strong thunderstorms that started over west Texas near Del Rio, that moved southward across the Brush country showing some weakening trends. However, as the storms reached the more unstable atmosphere near the coastal area, the storms strengthened bringing strong winds to areas along the northern Coastal Bend – particularly over Port Lavaca. Estimated winds in excess of 70 mph were experienced in Port Lavaca which caused trees to be uprooted and large tree limbs to be scattered around in addition to roof damages and telephone poles being snapped. Elsewhere across South Texas, winds of 45-55 mph with higher gusts were being reported.

Heavy Rain/Flooding/Tornados, April 15/16

The combination of a stalled surface frontal boundary and an upper level disturbance became the focus for the heavy rain event that occurred April 15th/16th. In addition to the heavy rain, storms strengthened to produce large hail up to 1.75" in diameter reported in Goliad, along with 4 confirmed tornados that developed over the southern coastal bend – 3 of the tornados near the Portland/Gregory area. On the 16th, storms developed over the same locations throughout the day leading to general rainfall amounts of 2 to 6 inches – with isolated amounts up to 15 inches near Bayside. This type of constant, heavy rainfall led to multiple reports of flooding in eastern San Patricio, Nueces and Refugio counties.



ABOVE: The 2-day Rainfall amount for April 15/16. Areas in San Patricio County received the bulk of the heavy rainfall.

LEFT: Tornado damage to a grain elevator west of Taft on May 10.

For a more detailed report on these storms, check out the NWS Corpus Christi homepage: www.weather.gov/corpuschristi

Under **Additional Info—Major Events**

Tornados/Large Hail, May 10

A second tornado outbreak occurred on May 10th due to an approaching upper level disturbance that started the thunderstorm development early in the morning over areas across Brush Country, increasing in coverage farther east through the day, with a squall line finally developing late that night. Strong winds developed within the strong storms – especially late within the squall line. Storm surveys confirmed the development of 5 tornados – with 4 of the tornados over the coastal bend and one tornado northwest of Cotulla. The severe storms also produced large hail ranging from 1.00" across all of South Texas, with hail of 2.75" in diameter reported southwest of George West to 4.25" diameter hail reported southeast of Encinal.

SKYWARN Classes

by Christina Barron

What is SkyWarn? SkyWarn is a volunteer program comprised of nearly 290,000 trained severe weather spotters. SkyWarn spotters provide timely and accurate reports of severe weather to their local National Weather Service office. You'll learn what to look for when observing severe weather, as well as understand the development of severe thunderstorms, tornadoes and flash flooding.

How do I get involved?
Your local National Weather Service Office in Corpus Christi is extending an invitation for all of those interested in taking part in FREE SkyWarn training course. Courses are held **during the late winter/early spring** months before the peak of severe weather season.

NEW ONLINE Skywarn Training Course
Busy schedule? Take the new online courses to cover the basics of becoming a Storm Spotter. Click on the link to the main website (linked below), review the courses and email your certificate to John Metz (linked below). It's that easy!

Check out the following link for upcoming courses in your area: http://www.srh.noaa.gov/crp/?n=skywarn

If there are currently no classes being offered in your area and you would like to see what SkyWarn is all about, please email Jason Runyen (Jason.Runyen@noaa.gov) or John Metz (John.Metz@noaa.gov) and we can try to organize a course for your community.

Welcome New Observers!

by Juan Alanis

The National Weather Service in Corpus Christi would like to extend a big warm welcome to all new CoCoRaHS observers! We are looking forward to everyone's rainfall data, as it greatly helps verify radar rainfall estimates and monitor regional rainfall patterns over time.

More observers are needed throughout South Texas and the coastal bend region. Observers are especially needed the following areas:

McMullen County, southern **Goliad County** and northern half of **Refugio County**.

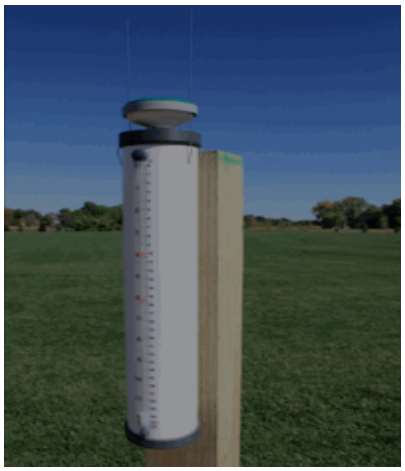
To become part of the CoCoRaHS observer network, all that is needed is a high interest in the weather and be willing to report rainfall totals daily. To join CoCoRaHS, log onto www.cocorahs.org and click on "Join CoCoRaHS". For more information, call Christina Barron at 361-289-0959 or Juan Alanis, Jr. at 956-251-3996.

NEW OBSERVERS	
TX-AR-8	Aransas Pass 6.1 NNW
TX-AR-9	Rockport 2.3 NNE
TX-BEE-16	Kenedy 13.5 SW
TX-BEE-17	Normana 0.5 ENE
TX-CLH 11	Port Lavaca 1.9 SW
TX-GD-23	Goliad 10.3 NE
TX-GD-24	Berclair 7.3 NW
TX-JW-8	Palito Blanco 1.0 ESE
TX-LS-9	Cotulla 9.7 NNE
TX-LO-16	George West 11.3 S
TX-LO-17	Mathis 11.6 NW
TX-NU-49	Port Aransas 1.5 ENE
TX-NU-50	Robstown 14.5 WNW
TX-RF-9	Woodsboro 0.3 W
TX-SP-14	Odem 0.5 W
TX-SP-15	Mathis 7.5 SSE
TX-SP-16	Aransas Pass 2.9 WNW
TX-SP-17	Portland 2.4 NE
TX-VCT-24	Inez 1.8 WNW
TX-VCT-25	Victoria 9.5 WSW
TX-VCT-26	Victoria 3.8 NW
TX-WB-41	Laredo 8.4 NNW
TX-WB-42	Laredo 4.9 NNE
TX-WB-43	El Cenizo 0.2 W

Observers Wanted for Measuring Evapotranspiration

by Juan Alanis

The official gauge for taking evapotranspiration observations.



As CoCoRaHS continues to grow and expand across the nation and Canada, so do the opportunities for people to help gather valuable weather information.

CoCoRaHS is now calling for very dedicated observers, those that have reported daily for a consistent amount of time, to help measure "evapotranspiration" or ET. ET is the water evaporated from the ground back to the atmosphere both as transpiration from the leaves of plants and also as direct evaporation from open water and soil.

Knowing the amount of water leaving the soil and returning to the atmosphere is just as important as the amount that falls as rain. It matters for agriculture, lawn care, weather prediction, hydrology and much more, so we should try to measure it.

Those interested should log onto www.cocorahs.org or contact Zach at: info@cocorahs.org for more information. Those interested should keep in mind that measuring ET is for the truly dedicated only, as an official ET gauge will cost $212 plus tax and shipping.

CoCoRaHS Webinars

by Juan Alanis

Would you like to learn about the weather from the experts and talk to them? CoCoRaHS has started a new series about the weather titled "CoCoRaHS Weather Talk". The series consists of monthly web seminars (webinars) featuring engaging experts for the world of meteorology, climatology and related fields. These webinars are about 60 minutes in length and allow audience members to ask questions to the experts.

Webinar topics include climate change, hurricanes, air pollution, radar meteorology among many others. These CoCoRaHS Weather Talk webinars are free to everyone, all you need to do is register through the CoCoRaHS web site to participate.

Upcoming CoCoRaHS Webinar Schedule:

Thursday June 14, 2012, 6PM CDT
Hurricane Analysis and Prediction at the National Hurricane Center
Chris Landsea, NOAA/NWS/National Hurricane Center
Miami, FL

Thursday July 19, 2012, 12PM CDT
Wind and Wildfire, A Dangerous Combination
Liz Page, UCAR/COMET
Boulder, Colorado

Thursday August 23, 2012 12PM CDT
Extreme Rainfall, How We Analyze It and How the Data is Used
Bill Kappel, Applied Weather Associates
Monument, Colorado

September 2012, date to be announced
So You want to be a meteorologist?
Dave Changnon, Northern Illinois University

Future webinar topics and dates will be announced in future issues of the South Texas CoCoRaHS newsletter.

CoCoRaHS WeatherTalk Webinar Series

National Weather Service
426 Pinson Drive
Corpus Christi, TX 78406

Public Phone Line: (361) 289-0959 ext.1
Recorded Forecasts: (361) 289-1861
E-mail: christina.barron@noaa.gov

National Weather Service Mission Statement:

The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.

Brief National Weather Service History:

The National Weather Service has its beginnings in the early history of the United States. Weather has always been important to the citizenry of this country, and this was especially true during the 17th and 18th centuries.

The beginning of the National Weather Service we know today started on February 9th, 1870, when President Ulysses S. Grant signed a joint resolution of Congress authorizing the Secretary of War to establish a national weather service.

ON THE WEB!

http://www.weather.gov/corpuschristi

CoCoRaHS Tips

by Christina Barron

Going on vacation for a couple of days and it rains?...

...use "**Multi-Day Accumulation**" for your rainfall report when you come back. When you're out and it rains, your rainfall report is still important to the NWS. By not knowing the exact day of when it rained, the multi-day accumulation report comes in handy!

Significant weather?...

...use the "**Significant weather**" or "**Hail**" link under the *"Enter New Reports"* section. During severe weather events, things such as excessive rainfall, hail, flash flooding, wind damage, and, yes, even in South Texas, snowfall, are well appreciated in real-time. When you use one of the mentioned links above, it alarms the computers at the NWS to let us know that you have just witnessed significant weather.

Now remember, if weather conditions outside are too dangerous for you to take measurements, please, wait out the storm and do not go outside. Your safety means more to us.

Dirty rain gauge?...

...using some dish soap and a bottle brush can do the trick!

Weather Q&A

Do you have any questions about the weather that you would like answered? Your questions could lead to articles in the next issuance of the CoCoRaHS newsletter! If you do, send an email to christina.barron@noaa.gov.

If you would like to be featured in the Fall 2012 edition of the South Texas CoCoRaHS newsletter, please email Christina.Barron@noaa.gov. We would love to hear from observers of SouthTexas!